D301. 81:25/12

UNIVERSITY OF FLORIDA LIBRARIES
APR 1976
DOCUMENTS DEPT.

Combat Crew

strategic air command

★★★★

DECEMBER 1975

FLARE

FLARE

Combat Crew

strategic air command

GEN. RUSSELL E. DOUGHERTY
COMMANDER IN CHIEF, SAC

MAJ. GEN. JOHN W. BURKHART
Deputy Chief of Staff, Operations

COL. JESSE S. HOCKER
Director of Safety

STAFF

MAJ. RICHARD W. BLATTER
Editor

G. FRANCIS FARRELL
Associate Editor

SSGT. W. J. SEALY
Art Editor

MARY JANE ABBOUD
Editorial Assistant

UNIV. OF FLORIDA LIBS.
DOCUMENTS
DEPARTMENT
U.S. DEPOSITORY

ON OUR COVER

The FB-111 is symbolic of SAC's strategic deterrent capability which has in the past, as well as today, given the nation the opportunity to enjoy a peaceful holiday season. From everyone in the SAC Directorate of Safety we wish you a Merry Christmas and a Happy New Year.

Contents...

Articles

ARF by ARF 4
Change Those Targets 8
Frost Bite 12
Before and After the Klaxon . 16

Features

Giant Sword '75 11
Big Instrument 24
Professional Performers . . 26
Flying Safety Rate 28
Safety Screen 29
Hall of Fame 30

SACRP 127-1 VOL. XXV NO. 12 DECEMBER 1975

COMBAT CREW is an internal publication of the Strageic Air Command with the sole purpose of promoting safety and is not for public release. The contents of this magazine are informative and not to be considered as directive in nature. Facts, testimony and conclusions of all accidents printed herein may not be construed as incrimination under Article 31 of the Uniform Code of Military Justice. All names, dates and places used in conjunction with accident stories are fictitous. Written permission must be obtained from Headquarters, Strategic Air Command, before any material may be reprinted by other than U. S. Air Force organizations. Use of funds for printing this publication has been approved by Hq. USAF. Contributions are encouraged, as well as comments and criticisms. Direct correspondence with the Editor is authorized. Address correspondence to Editor, COMBAT CREW, Hq. SAC (DOSE), Offutt AFB, Ne. 68113.

YOUR CAREER... WHERE WILL IT LEAD?

LIEUTENANT GENERAL JAMES M. KECK
Vice Comander In Chief, SAC

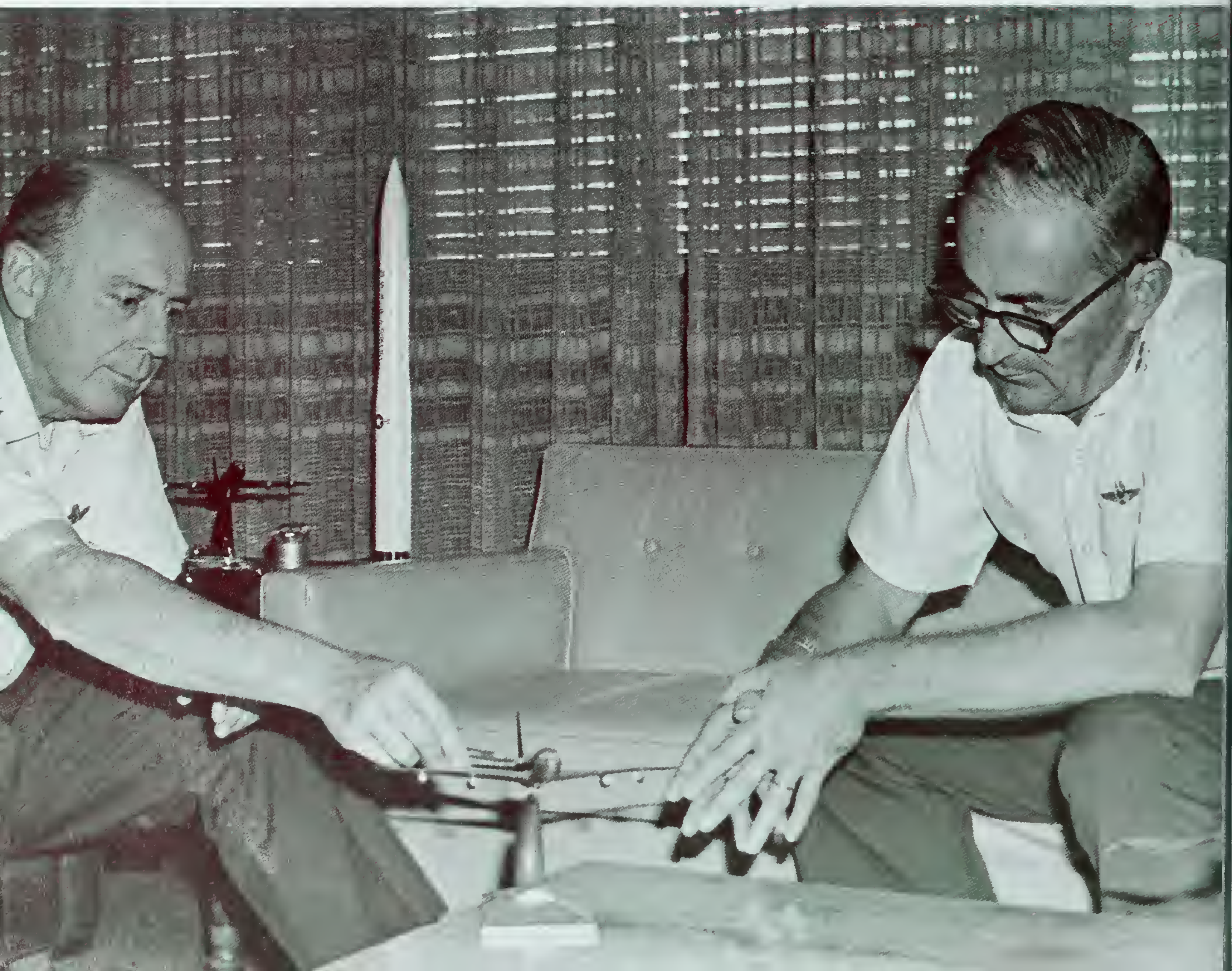
The most frequently asked questions by crewmembers—all crewmembers from Missiles to Bombers to Tankers to Recce—relate to their individual careers. What should I do when I finish crew duty? Will the new OER system hurt? Is crew duty good for my career? Are crewmembers selected for promotion as frequently as non-crewmembers? What advice can be given?

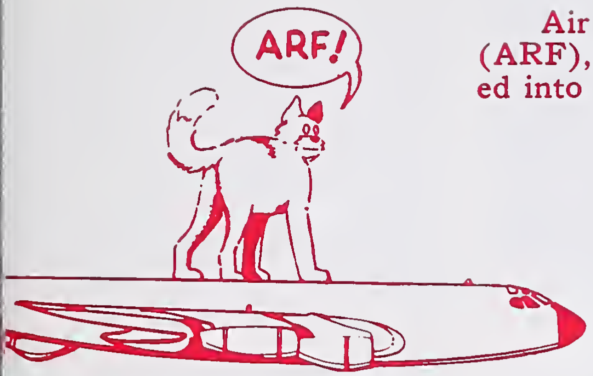
This concern can spring from ambition or it can be a reflection of the emphasis the Air Force places on career development—the counseling offered at all levels, the making out of Form 90s, and the increased opportunities for self-improvement. A word of caution is appropriate here—ambition is not always good, and too much ambition is not ever good.

By definition, ambition is "an eager or inordinate desire for attainment" and ambition suggests "personal advancement as its end" also "pretension." In the military profession, the ambitious officer may make decisions to improve his personal position at the expense of the mission—and this is totally unacceptable and usually disastrous. Similarly, the individual who spends time worrying about his own future cannot be spending enough effort and thought on how to do his present job. So, if you are concerned about your future, examine your basic motivations and keep your concerns in perspective. In this regard, it may well be time to collectively decrease the emphasis we place on career development for its own sake and increase the emphasis we place on career development to do our work better, to

(Continued on page 25)

ARF





Air refueling by Air Reserve Forces (ARF), a new ingredient now being blended into the SAC mission formula—

MAJ GEN RICHARD BODYCOMBE
Mobilization Assistant to the CINCSAC

On 1 July 1975, a long-awaited chapter was opened in the history of both the Air Force Reserve and the Air National Guard (when taken together the two components are known formally as the ARF). On that date, the 160th Air Refueling Group (Ohio ANG), Rickenbacker AFB, Ohio, switched its "gaining command" allegiance from TAC to SAC in the first step of a four-year plan that will significantly change the complexion and bed-down of SAC's tanker force.

In September 1974 while speaking to a meeting of the National Guard Association of the United States, the Honorable William K. Brehm, Assistant Secretary of Defense (Manpower and Reserve Affairs), made low-key reference to a new plan that would soon direct the transfer of 128 KC-135 tanker aircraft to the ARF. This announcement was the result of a well staffed Program Decision Memorandum that had cleared the Secretary of Defense's office some seven weeks earlier, but had been held for release as part of Secretary Brehm's NGA US address. With this unpretentious announcement, Strategic Air Command, the last of the Air Force's major combat commands, became a customer for ARF flying units.

The new plan known officially as the ARF Tanker Transfer Program, calls for the uncomplicated and orderly changeover of 128 KC-135 aircraft from six active duty SAC squadrons, to 16 ARF units at the rate of one ARF unit per fiscal quarter, starting in FY 1/1976.

NAVIGATING NEW AIR GUARD MISSION—New Hampshire Air Guard navigators are shown during training session for their role in the new KC-135 jet tanker air refueling mission. Standing at left is Capt Charles H. Jedicke, Instructor Navigator from the 509 AREF Sq at Pease who is assisting NHANG personnel in the assumption of their new duties. NHANG navigators pictured are (left to right) 1Lt Carl Feldman of Manchester, Lt Col Walter Tillson of Groveland, Mass., and Maj Kenneth Dodge of Manchester.

Mathematically, this translates to eight UE per squadron. Crew ratio, subject to future reevaluation was established at 1.5 or 12 crews per location. Six of these units have been identified, with the remaining 10 currently undergoing Air Staff scrutiny and coordination prior to a public announcement as to the ultimate bed-down. The current approved unclassified line-up is shown as Figure 1.

The Air National Guard is no stranger to air refueling. Since 1962 ANG squadrons have been operating KC-97L aircraft—a standard KC-97 augmented with J-47-GE-25A turbine engines located outboard of the number one and number four R-4360 piston engines. Located on eight civilian airports and two military installations, these squadrons have amassed some impressive statistics:

- Nine ANG units with 72 KC-97L aircraft have flown more than 270,000 hours.
- Based at Rhein-Main, Germany, ANG tankers in operation CREEK PARTY have flown more than 43,000 hours and off-loaded more than 127 million pounds of fuel in support of USAFE requirements. CREEK PARTY, which began in May 1967, is the longest continuous employment of reserve forces overseas without mobilization.

Late last winter following a series of exploratory meetings between

DROGUE INSPECTORS—Checking out the drogue apparatus on the N.H. Air National Guard's first KC-135 tanker aircraft are, left to right, MSGT Real Beaulieu of Manchester and MSGT Maurice Doucet of Hookset. Both are inflight refueling technicians (boom operators) and are first "boomers" to complete the KC-135 Combat Crew Training School at Castle AFB, Calif., and return to Pease AFB, N.H. to train other aircrew members of the NHANG 157th Air Refueling Group. This aircraft and drogue have already been used by a NHANG aircrew in refueling four F-100s of the Massachusetts Air National Guard.

FIGURE 1

UNIT	LOCATION	FORMER AIRCRAFT	SAC ADVISORY WING
160th ARG	Rickenbacker AFB OH	KC-97L	301 AREFW
157th ARG	Pease AFB NH	C-130A	509 BMW
189th TRG	Little Rock AFB AR	RF-101	97 BMW (Blytheville)
101st FIW	Bangor INtl Arpt ME	F-101	42 BMW (Loring)
141st FIW	Fairchild AFB WA	F-101	(To be announced)

the major parties concerned—Hq SAC, SAC numbered air forces, the National Guard Bureau, and representatives of the Chief of the Air Force Reserve, the major conceptual framework of the program began to emerge. Some of the basic decisions made at that time were:

1. Units will be expected to be C-3 or better in one year after conversion. After that time, they will become vulnerable for all the various SAC inspection and evaluation activities, ORIs, CEGs, etc.

2. Upon having at least C-3 status verified, the unit will then be eligible and expected to participate in all types of SAC's refueling missions to the maximum extent possible. These will include:

- SIOP alert (one line per unit).
- Training with the SAC bomber fleet.
- Lateral command refueling support.
- SAC tanker task forces.
- EWO generation (as directed).
- Contingency actions.
- JCS exercises.

3. Units will not be required to comply with the integrated crew concept.

4. Two highly qualified pilots, navigators, and boomers (potential instructors) will complete the CCTS

(Continued on page 20)

SENSITIVE AREA—Checking the operation of the inflight refueling equipment sensors on the NHANG's new KC-135 jet aircraft are SSgt Donald Abbott, an Air Force Advisor attached to the unit, and MSGt William Jacob of Suncook (right), member of the 157 CAM Sq.

CHANGE THOSE TARGETS

MAJ JAMES D. OSGOOD JR.
Defense Nuclear Agency

During General Bruce K. Holloway's tour as CINCSAC, he often stated that, "Should the need arise, I want to be able to pick up that phone and dial new targets into our missiles—instantly!" The current Command Data Buffer (CDB) concept goes a long way toward meeting that requirement. CDB provides the capability for rapid flexible remote retargeting of a large share of our MINUTEMAN III missile force.

From mid-1970 through mid-1974, the midnight oil burned continuously at the desks and in the conference rooms of the various SAC and AFSC project officers as CDB went through the developmental sequence, last minute refinements and finally, installation at the 90 Strategic Missile Wing at Francis E. Warren AFB, Cheyenne, Wyoming. Work has also been completed on the changes and modifications necessary for subsequent deployment of CDB at the remaining MINUTEMAN III locations. Minot AFB, North Dakota, is currently undergoing the modification. Grand Forks AFB, North Dakota, and the 564SMS at Malmstrom AFB, Montana, CDB deployment will follow. SAC had its initial operational capability in mid-1973 and the currently approved deployment for the multimillion dollar program will be complete in mid-1977.

Targeting for non-Command Data Buffer missiles originates with specific targeting assignments made by the Joint Strategic Target (JSTPS). The assignments are provided to Hq SAC, DCS/Intelligence and DCS/Operations Plans where target kits and execution plan tapes are produced, verified and distributed to the applicable strategic missile wings. These materials are administratively validated, processed through the unit Code Inserter Verifier (CIV), and dispatched via a combat targeting team to each affected Launch Facility (LF). These tapes are then read into the flight computer aboard the missile and the old targets are removed. Many hundreds of miles have been driven each year through snow, ice, wind, hail and mud and many thousands of man hours have been expended just to maintain current target assignments in our strategic land-based missiles.

The JSTPS still plays the same role in selecting Command Data Buffer targets but this is where the similarity of the two systems ends. Magnetic tapes and plated wire computers have replaced target kits and 50 degree below zero launch facility penetrations. During major retargeting operations, new targeting data are provided to the missile unit in the form of magnetic tapes (work orders). During the life of any Single Integrated Operations Plan (SIOP) revision, additional target changes may be necessary, particularly during trans or post attack situations. Individual targeting work orders may be sent to the missile wing or directly to the Missile Combat Crew by means of administrative TWX, letter, SAC Automated Command and Control System (SACCS) or the Primary Alerting System. There are also provisions for transmitting the targeting data to the combat crew by radio from the Airborne Launch Control Center (ALCC) or the Airborne Command Post.

In addition to the Targeting Work Order, several basic software and hardware items are required for retargeting missiles. The heart of the Command Data Buffer System is the Weapon System Controler (WSC). The WSC is a general purpose digital computer located in the Launch Control Center. The WSC memory unit is a nondestructive readout, plated wire modular form. It contains over one million bits of memory. Interfaced with the WSC is a bulk store memory called the Memory Controller Group (MCG). The MCG provides over eight million bits of nondestructive readout storage associated with the Operational Executive Program (OEP) and the data bases used in the targeting and execution plan processes.

The OEP is a magnetic tape, stored in the WSC memory, and has the overall responsibility of insuring that other software performs its required functions in the proper sequence. Basically, this function involves the generation of target and execution plan data within the computer and the transmission of this targeting data to the missile computer.

Several other software programs are associated with CDB. However, for the sake of brevity and simplicity, only two more software programs and their associated data bases will be introduced in this discussion. They are: The MINUTEMAN Operational Targeting Program (MOTP) and the Execution Plan Program (EPP).

The MOTP is stored in the MCG memory and executed in the WSC. Basically, it provides each LCC with the program logic and models necessary for computing the three sets of target constants required for retargeting a MINUTEMAN III missile. The MOTP is transferred from the MCG into the WSC in blocks as required for targeting computations. Associated with this program is the MOTP Data Base Tape which is also magnetic in form and produced by Headquarters SAC and stored in the MCG memory. Each tape is unique to the missile wing for which it is produced and contains data for each launch facility in that wing. It provides a launch region gravity model, launch site data, target area climatology and minimum case input data which are used by the MOTP in generating target constants.

Each missile must be launched in accordance with a specific execution plan. The Execution Plan Program (EPP) is necessary to meet this requirement. The EPP is stored in the MCG until needed in the WSC for execution plan genertion. The Execution Plan Data Base tape provides supplemental data for use by the EPP. This data base is a magnetic tape produced by Headquarters SAC and is stored in the MCG. It produced by Headquarters SAC and is stored in the MCG. It provides missile sortie and launch delay time data.

Another piece of hardware unique to Command Data Buffer is the keyboard-printer. It is quite similar in appearance to a normal office typewriter. The keyboard printer provides the interface between the operator at the communications control console and the Operational Executive Program in the WSC. It provides for insertion and verification of targeting data (routine and priority Targeting Work Orders) and the commanding of distinct operations relating to the target constant generation, execution plan generation and Remote Data Change (RDC) functions.

In a typical scenario, the crew on duty in Launch Control Center—A01 has been directed by CINCSAC to change targeting data in Launch Facility A05. Their instructions have also been received at the other four Launch Control Centers in the squadron. The Work Order is being reviewed by the Alpha crew for validity. The Wing Command Post calls and informs the crew commander that he will be Primary launch control center for this operation and that Bravo crew will act as the Monitor launch control center. Both crews now begin to insert the new targeting information into the WSC by means of the keyboard printer. This typing operation has taken approximately 5-10 minutes. Now Alpha crew commands the WSC to perform Target Constant Generation (TCG). Time lapse is 5 minutes. The constants are now ready to be transmitted to launch facility A05 by either buried underground cable or radio. The cable mode is selected and transmission (Remote Data Change—RDC) begins.

The data passes through the Secure Data Unit (encryption/decryption device) at the LCC and is received at A05 and all other Squadron Launch Control Centers through their Secure Data Unit. Bravo launch control center assumes his monitor responsibilities. Time lapse for the RDC is ten minutes. Bravo crew now has all the data transmitted by the Alpha crew and checks the data on their computer. Time lapse—four minutes. The data transmitted by the Alpha crew is good! Bravo now authorizes A05 to store the data. While the RDC of the target constants has been going on Alpha crew has performed the same operation with generation of new execution plan constants without additional time delay. Bravo is now ready to check this data for authenticity—it is good and storage is authorized. Additional time—about 30 seconds. Upon receipt of a Preparatory Launch Command, A05 is now ready to be launched against the new target.

This is only the beginning. Future changes and modifications to the CDB system will reduce retargeting times even more significantly. New flight programs and particularly advanced flight computer on board the missile will reduce retargeting times to "seconds" for a missile and "minutes" for an entire wing. Hopefully, the entire MINUTEMAN force will receive CDB in the near future.

Castle's 93d Bomb Wing, retained its title as the best munitions unit in the Strategic Air Command and won GIANT SWORD '75—the command's Munitions Loading Competition held in October.

The 93d's win was by the narrow margin of .8 of a point—1,818 over the 379th Bomb Wing, Wurtsmith AFB, Mich., with 1,817.2. Seymour-Johnson AFB, N.C., representing both SAC and TAC in the meet, recorded a total 1,800 points for third place.

In addition, the Castle win also took home the Munitions Loading Award. They won the event by edging out Seymour-Johnson AFB by 3.5 points 1134.5 to 1131.

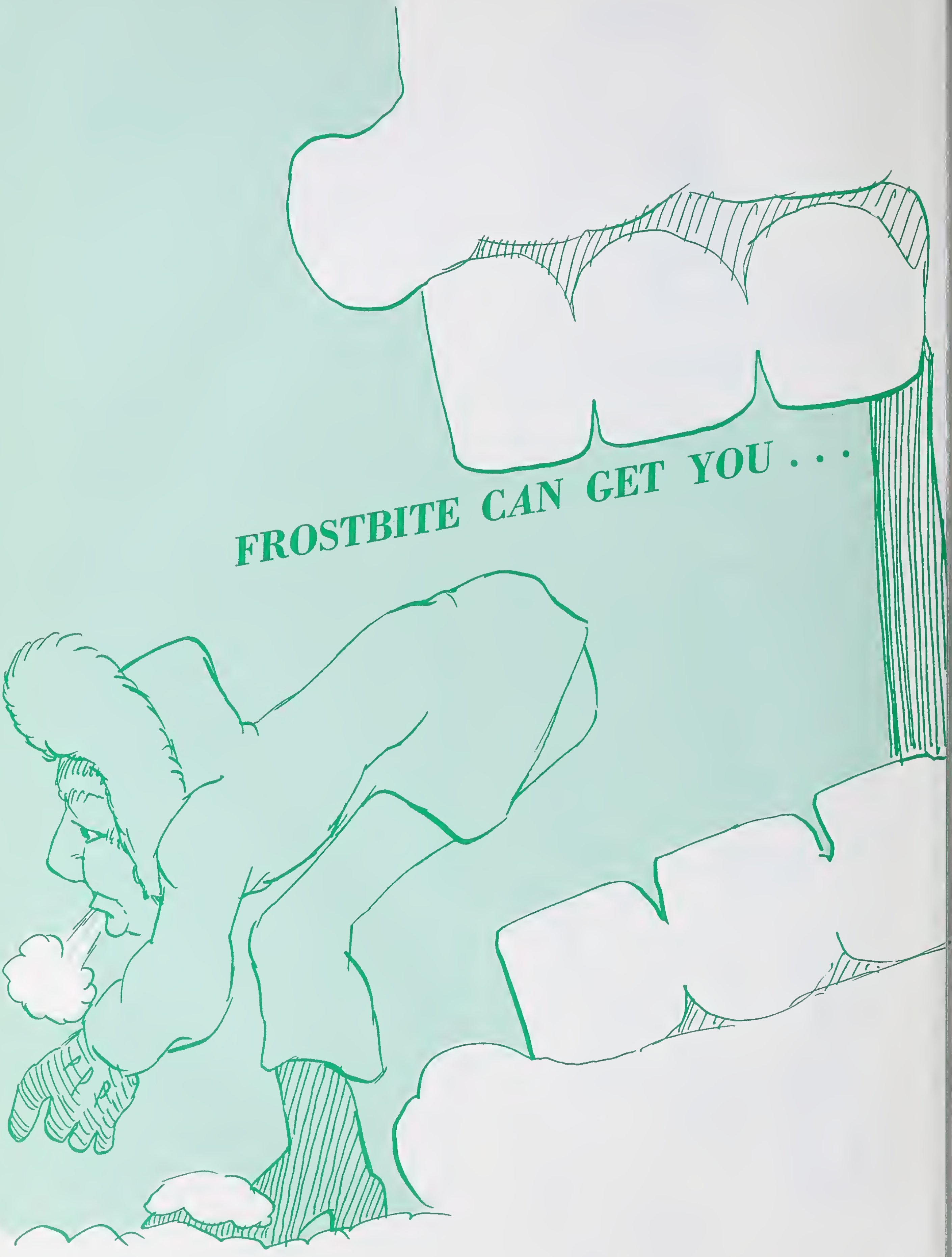
The three remaining major awards in the competition were won by the 28th BW, Ellsworth AFB, S.D., for the showing by its crew chief; the 380th BW, Plattsburgh AFB, N.Y., for the loading equipment inspection, and the 42d BW, Loring AFB, Me., for its security police team effort.

The Equipment Inspection Award was won by the 380th on the first day of competition when the unit posted a perfect score of 100 points. The closest rivals—four units with identical scores—were 15 points off the mark.

The Crew Chief Award race was much closer however, with Ellsworth's Sgt Jeff Redder just squeezing past the Pease team member by one point; 95 over 95.

The munitions load and security police team scores were also very close. GIANT SWORD competitors watched the big score-board closely as they awaited the return of the judges from the flight line with the load score, and for the buses to return from the firing range where the security police made their bid for perfection. Finally the posters emerged—chalk and stencils in hand. When they were through, Loring had won the Security Police Team Award by three points.

There were many high points throughout the seven days of competition the most exciting of which was probably the near perfect munitions loading score .posted by the Wurtsmith team. Their 598.4 score, short of a possible 600 only because they over shot the timing criteria by 24 seconds, was unexcelled in the meet. Carswell also added its own brand of excitement by holding on to first place—based on the percentage of available points each day—for the first five days of the meet. They were edged out of the lead primarily due to being unscheduled on the sixth day. Castle took over the lead and maintained it to the finish to retain its "Best in SAC" GIANT SWORD title.



FROSTBITE CAN GET YOU . . .

LT. W. C. NESBITT
28AREFS, Ellsworth AFB

Most SAC crew members have attended presentations on the causes, effects, and prevention of frostbite. However, it seems to be inherent in the nature of briefing that the information that goes in one ear quickly exits from the other, nevermore to heard or thought about by the briefee—until the next winter safety briefing. This discourse will explain, clearly and fairly concisely, the causes of frostbite, how it can be prevented, and failing that, how it can be recognized and treated. The assumption is made throughout that you are not more than a day or two from civilization and medical aid—for example, on a hunting or skiing trip, or standing by a broken car midway between Ellsworth and Rapid City. Also, since in the vast majority of bailouts the crew member is picked up within a day or two, the above assumption should be valid in all but the most extreme situations.

Frostbite and hypothermia have two things in common: they are usually associated with cold weather, and their effects are rather unpleasant.

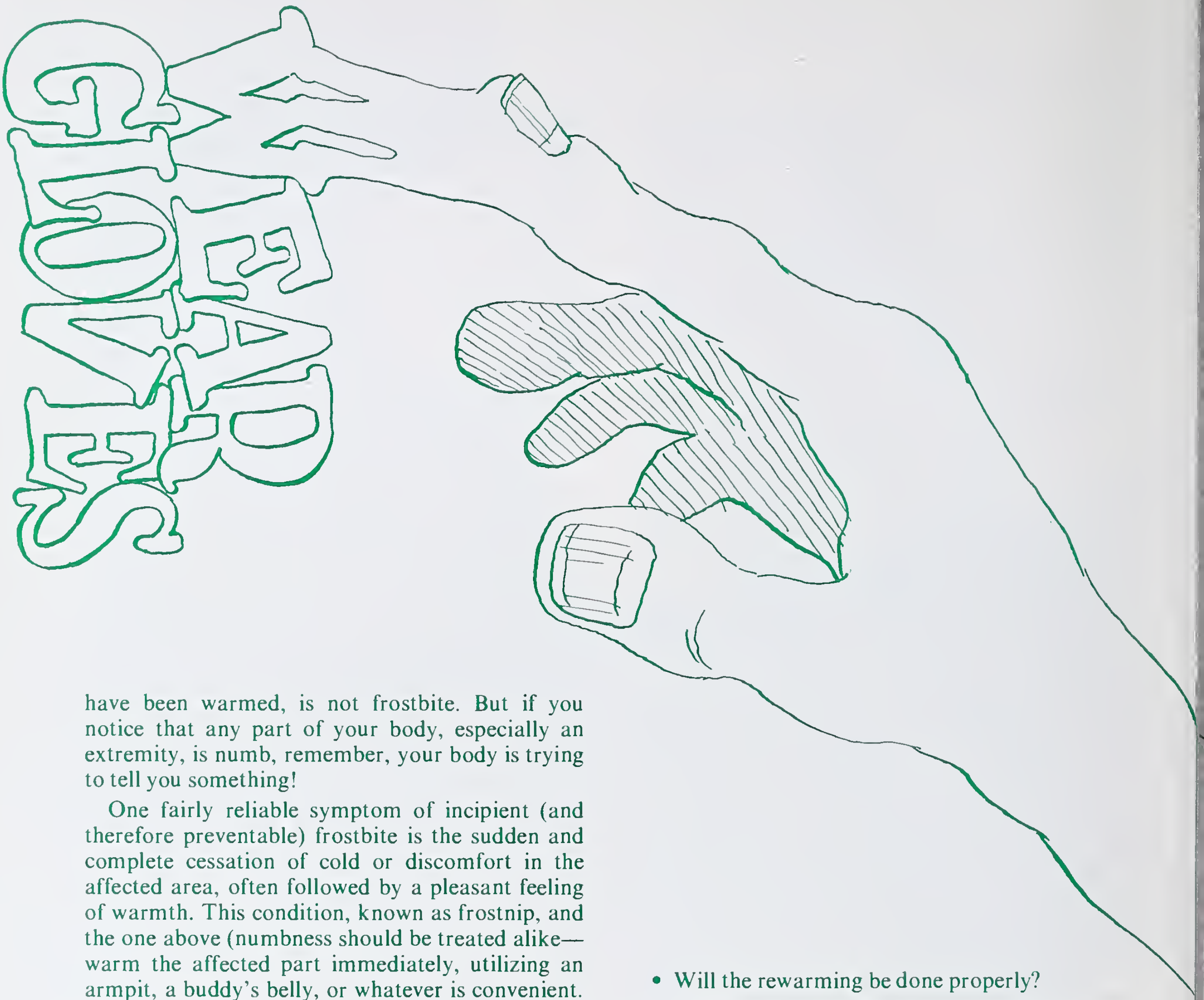
The two major factors which determine the extent of frostbite injury are the type and duration of cold contact. You have probably had a hand stick to an ice cube tray when removing it from the freezer. When was the last time that your hand stuck to a carton of ice cream or to a frozen pizza under the same circumstances? This illustrates the fact that touching cold wood or fabrics (or ice cream cartons) is not nearly as dangerous as coming into direct contact with cold metal, particularly if the hands are damp or wet. Air, being a very poor thermal conductor, is even less dangerous provided that the air is still. As you know, the chilling effect of air increases dramatically as the wind speed increases. However, you may not be aware of how little wind is required. As the standard windchill nomogram shows, the chilling effect of a temperature of +10° F combined with a wind of only 25 mph is equivalent to a no-wind temperature of -30° F. You may find this difficult to believe, but it's true. As for the duration of cold contact, it should be obvious that the longer the cold contact (from whatever source) lasts, the greater the chances of frostbite.

So much for the general causes of frostbite. Once cold contact has occurred, what processes actually take place within the body that allow a part of it to become frostbitten?

As you are aware, the arteries carry a supply of freshly oxygenated blood from the heart through a system that repeatedly subdivides into smaller and smaller arteries until, after the artery has tapered to a very samll size (about 0.2 mm in diameter), it is termed an arteriole. After passing through the arterioles, the blood enters a capillary loop (which is merely a maze of capillaries, each only about 0.01 mm in diameter), which then converges into a venule (a very small vein), several of which converge into a vein, and so on back to the lungs. At this point it is important to mention a basic difference between an arteriole and a capillary. A powerful system of muscles is built into the walls of an arteriole, whereas a capillary is simply a very tiny, non-muscular hose. When cold contact occurs, for example by grasping a wrench at -40° F with the bare hand, thwo things occur: first, the superficial tissue at the site of contact freezes to a depth dependent on the degree of cold and the length of contact, and second, immediately below this zone, the chilling causes the blood to become so viscous that capillary circulation comes to a halt even though the tissue in this zone is not frozen. Unless the hand (or whatever) is promptly rewarmed, vasoconstriction of the arterioles rapidly reduces the flow of blood in this zone. Now an emergency circulatory mechanism known as the capillary shunt comes into play. Once the capillary bed has been chilled to the point of inactivity, i.e., blood has ceased to flow in the capillary loop, the arterial blood bypasses the capillaries entirely and is routed directly from arteriole to venule in an effort to keep the chilled part warm and continue blood circulation. This starts a flow of chilled blood back toward the heart, and since oxygen and food cannot pass through the walls of arterioles or venules, totally deprives the shunted area of nourishment. However, this blood may keep the adjacent tissue from freezing.

If the source of cold is not removed, a vicious cycle now begins. Since these capillary shunts operate in a cyclical fashion rather than continuously, they will start and stop, causing the area affected to alternately warm and chill. If this continues to the point where loss of body heat exceeds one's heat-producing capacity, the body's core temperature drops. When this happens, the cyclical shunts cease and since chilled blood is no longer going to the body core, the body warms up again. But the extremity will quickly freeze. Ice crystals will form and grow between the cells, deriving the water for their growth from the cells themselves, which begins to dehydrate them. Shortly they will be dehydrated to the point that their internal chemistry is disrupted, and the cells will die. Aside from that, since the cells have now been deprived of food and oxygen, they will starve, become hypoxic, and die.

Recognition of frostbite is usually simple. Numbness of toes, fingers, or other parts of the body, followed by a tingling sensation after they



have been warmed, is not frostbite. But if you notice that any part of your body, especially an extremity, is numb, remember, your body is trying to tell you something!

One fairly reliable symptom of incipient (and therefore preventable) frostbite is the sudden and complete cessation of cold or discomfort in the affected area, often followed by a pleasant feeling of warmth. This condition, known as frostnip, and the one above (numbness should be treated alike—warm the affected part immediately, utilizing an armpit, a buddy's belly, or whatever is convenient. Do not rub the part. And, unless you want the frostnip to develop into frostbite, do not rub it with snow or anything cold.

True frostbite is characterized by a white, possibly waxy appearance of the skin or the tissue immediately below it. The damage may be superficial, in which case the frozen part is soft and resilient below the surface when depressed firmly, or the damaged area may be quite hard and solid, like a frozen steak, in which case the damage is obviously much worse. After rewarming, the injured part may turn various ghastly colors while other interesting things, such as blistering, occur, but these are irrelevant to this discourse since the treatment described here is **first aid only.**

In all cases of bona fide frostbite, the victim should be taken to a hospital as soon as possible. However, if the victim cannot be taken to a hospital immediately, the decision must be made whether or not to attempt to rewarm the injured part. The major questions which bear on this decision are:

- Will the rewarming be done properly?
- After rewarming is accomplished, will the victim be maintained in a warm environment?
- After rewarming is accomplished, will the victim not have to use the injured part?

If the answer to any of the above questions is no, then rewarming should not be attempted. Otherwise, rewarming should be initiated as soon as possible. If the decision is made not to attempt rewarming and the victim cannot be expeditiously moved to a source of qualified medical aid, then consideration should be given to taking the victim to a place where reasonable comfort, equable temperatures, food, and total rest are available. Once the victim has been moved to such a place, rewarming should be initiated if the necessary facilities are available.

Before discussing how to properly rewarm the injured part, let us first consider a few situations under which rewarming should not be attempted. Slow and/or inadequate rewarming is often followed by refreezing, and can cause so much damage and needless complication that the injured part should be left frozen, even for many hours. During that time, the victim may be taken to a place where proper rewarming can be accomplished and maintained. Thus, one should not attempt to rewarm frostbite on the trail. A person can walk a long way on a frozen foot without injuring them much more than they already have been, but if a foot or toe is rewarmed on the trail, the victim immediately becomes a litter case. If the victim is permitted to walk at all on thawed feet or toes, a very serious loss of tissue is almost certain to result.

Once the victim has reached a place where plenty of warm water is available, warmth can be maintained, and where the person will not have to use the frozen part at all, the victim should be treated simultaneously for hypothermia and frostbite. The largest available vessel of water should be warmed to 108° -112° F while the victim's body is warmed as much as possible. Gently remove the clothing from the frostbitten part and immerse it in the water. The water temperature must never rise above 112° F. If the water temperature drops below 108° F, add more water (again do not exceed 112° F). As this procedure will be somewhat painful, the victim may be given two aspirin tablets—but no other medication, including alcohol. After about 20 minutes, the warming may be stopped. The victim must then rest in a warm place, and must not attempt to exercise the injured part. After rewarming has been completed, clean the affected part very gently, using the mildest soap or non-alcoholic antiseptic available. Be sure not to use antiseptics containing alcohol, as they may not only be very painful but also are liable to do further damage to the delicate injured tissue. Keep the injured part open to the air or, if not feasible, cover it with loose, soft, dry dressings. A few points to observe are:

- Do not let the victim drink alcohol or smoke. Because impaired local circulation is the primary cause of frostbite, one must avoid anything which has even a mildly adverse effect on normal peripheral circulation. Drinking alcohol results in vascular dilation and an increased flow of blood at the surface of the body. This blood is unduly chilled and as it returns to the heart and lungs, may lower the temperature of the whole body significantly. Smoking results in varying degrees of spasm in the blood vessels throughout the entire body, thus reducing normal peripheral circulation and the flow of oxygen and nourishment to the tissues, at a time when both are badly needed.
- Do not rub the injured area with anything.
- Do not allow the victim to use or exercise the injured part.
- Do not expose the injured part to any source of intense heat such as hot water or a fire.
- Do not prick or open blisters.
- Do get a doctor. This is emergency first aid only, and the victim must be placed under a doctor's care as soon as possible.

Two factors will determine the success or failure of treatment for frostbite: the exercise of extreme care during and after rewarming and the prevention of infection from the beginning of rewarming until the victim is completely healed.

Prevention of frostbite is mostly common sense.

- Dress intelligently, using the layer system and avoiding tight-fitting clothes which tend to restrict circulation.
- Wear mittens rather than gloves. If you require fingertip dexterity while handling a cold object—for example, using a camera—wear a pair of thin nylon or silk gloves under the mittens. Although their insulation value is nil, they will keep your hands from coming into direct contact with the cold object. Put the mitten back on as soon as you can.
- Do not neglect to wear proper headgear. A large part of the body's blood supply is circulated through the head and neck region. As a result, an unprotected head may lose up to 50% of the body's total heat production at 40° F, and up to 75% at 5° F, which proves the wisdom of the old maxim, "When your feet are cold, cover your head."
- Keep your clothing dry.
- Avoid overexertion. If you start to sweat, either slow down or adjust your clothing—open a zipper or remove a layer of clothing, for example. But put it back on before you start to feel chilly. Extreme exertion (i.e., sufficient to cause you to pant) should be avoided like the plague, since very cold air brought too rapidly into the lungs can chill your whole body.
- Your body needs fuel to produce heat, so stay well-fed.
- Be extremely careful if you have to handle liquids, such as water, JP-4, or gasoline. The rapid evaporation rate of gasoline, coupled with low termperatures, can make it extrememly dangerous if you spill it on yourself.
- Use the buddy system to watch the faces of your partners, since forstbite of your ear or nose will probably not be noticed by you.

Remember, frostbite injures, but hypothermia can kill. Both are preventable.

Editor's Note: Lt Nesbitt's article is based on technical information from Dr. Bradford Washburn's book, **Frostbite.** (Not to be reproduced without the written permission from Boston Museum of Science.)

BEFORE AN

AFTER THE KLAXON

CAPTAIN THOMAS COUCH
320 Bomb Wing, Mather AFB

Every effort the individual makes in a SAC unit is for one purpose—to get the weapons on target. This is the underlying "Silver Thread" that should bind the unit together. A significant part of getting the weapons on target is getting the bomber and tanker alert force into the air. The unit command post performs a major function in this process. Most crew members are thoroughly familiar with their duties when the klaxon sounds, but do they consider what happens in the command post before and after the klaxon?

In units with only aircraft or only ICBMs, the unit command post consoles are manned by two emergency action (EA) controllers, an officer and an NCO (or sometimes an airman). In consolidated command posts, console positions are manned by two officers and one NCO. In command posts that control only aircraft, the officer is usually qualified in one of the unit's tactical aircraft. The NCO or airman is a command post specialist trained for that particular job. The two EA controllers are directly responsible to both the wing commander and higher headquarters for command and control of the alert force. Their primary duty is to be "completely familiar with message formats and to have a thorough understanding of the emergency actions and orders these messages implement."

What does this mean, and further, what does it entail? The Primary Alerting System (PAS) is the primary means of communicating EA messages both to the unit command post and the alert crews. In addition, there are alternate systems available. These include the Survivable Low Frequency Communications System (SLFCS) SAC Automated Command and Control System (SACCS), SAC Telephone Net (STN), and other communication systems.

The PAS is an unsecured telephone system that links the unit command post directly with the parent NAF and the SAC command posts. Through PAS, the unit receives various messages which range from tests of the PAS to actual messages that can change the status of the alert force. It is the job of the controller to properly interpret these messages, determine the effect on

The activity in the unit command post increases before and after the klaxon.

the alert force, and implement the appropriate action which changes the status of the force. Whether the message directs an exercise or a strike by the alert force, controller actions are basically the same.

Before the klaxon sounds, the controller is engaged in routine command post functions such as dispatching Red Balls for prelaunch aircraft, coordinating crew and maintenance status, obtaining parking spots for landing aircraft, and a myriad other details. This routing is broken periodically by the familiar warble tone that precedes messages broadcast over the PAS. The controller is then alerted to receive a message which could be nothing more than new UHF traffic or a test. But suppose the message is an exercise for the unit. The encoded message is broadcast and copied by one EA controller. The other controller insures the message has been copied accurately. Both controllers identify the message and initiate the appropriate checklist.

Normally, the first few items are committed to memory, but both controllers follow the checklist to insure that each step is accomplished correctly. The command post has ten or more checklists within easy reach of both controllers, there-

fore the first step is to make sure the proper checklist is being used. Checklist familiarity is the key here as well as in the aircraft.

The next step is to determine if the unit is affected. Because of the many variables involved, this determination is sometimes difficult.

"Are we in an exercise degrade? Do we have an emergency in progress? Are we addressed?"

The next step is to hit the klaxon switch to energize the klaxon circuit basewide. Then broadcast "Klaxon, Klaxon, Klaxon" on the UHF radio. The following step is to make the UHF-PAS patch by connecting the command post UHF transmitter to the PAS transmission from higher headquarters. This does three things: first, it allows one to hear direct transmission of the higher headquarters controller; second, it blocks any transmission capability from the unit command post; third, it blocks any other reception capability in the command post. In the aircraft the crew may hear only the last part of the higher headquarters transmission, depending upon the reaction time of the controller team. While the crew is copying the message, controllers make sure that the klaxon actually sounded in the alert facility. The HHQ command post reads the exercise message and then directs "Acknowledge now!" In the command post, a controller depresses the acknowledge button on the PAS panel and rearms the PAS-UHF patch for the next message. The next few moments can be hectic.

After the klaxon has sounded, controllers continue the checklist, gathering the runway data and preparing the message for the initial broadcast. The officer controller must broadcast initial controller instructions to the alert crews. He is monitored by the enlisted controller. If an error is detected, the enlisted controller covers the format with his hands until the officer transmits "Correction, Correction." Once this has been done, the enlisted controller removes his hands and points to the error. The officer will then transmit "Eliminate" (17 M, for example) and continue the message transmission. After the first few elements of the message, there will be a pause. The pause is included so that the crew in the aircraft can contact the command post if necessary.

This brings out an interesting point. Any official participant can terminate an exercise for reasons of safety. All that must be done is to broadcast, "Terminate, Terminate, Terminate." The command post controller stops his broadcast and passes the terminate message to the tower. The tower will then broadcast the terminate message on guard. Aircrew actions are to hold position until the situation is assessed and further directions are received.

Once the message has been broadcast to the crews, the pace of controller activity increases dramatically. The coordination begins. Notification is immediately made to Job Control, Central Security Control, and tower. The wing commander is notified and a Hotel Conference is established. The status of the aircraft is determined. Are there cartridge malfunctions? Are all aircraft taxiing? Allowing time for successful completion of aircrew checklists, the controller team will then broadcast a message that will direct your sortie to return to normal alert status. In addition, crews are directed to stand by for a poll of the times that they were ready to taxi and cross the runway hold line.

Once the alert is terminated and the force is polled, the command post controllers start cleaning up the remaining details of the exercise. Parking the aircraft, advising Job Control of aircraft malfunctions, and keeping the commander informed are part of the process. In addition, tower, security police, and Job Control are notified that the exercise has been terminated.

The whole process seldom lasts more than an hour from the initial warble tone to the last engine shutdown. But it is important to remember that during that hour the other functions of the command post don't magically disappear. If you'd like to see what really happens, ask the senior controller if you can be on hand for the next exercise. Most controllers would be glad to have you observe. I guarantee you'll be amazed to see how the other half lives.

(Continued from page 6)

course at Castle AFB. The remaining ARF crews will transition at their home station.

5. SAC will designate an active duty wing to act as an advisory unit to each ARF squadron. A 13-man PCS advisory team will also be placed at each ARF location. The number and tour length for additional temporary advisory personnel will be tailored to fit the ARF unit's individual requirements.

6. The criteria for aircraft selection for transfer of the ARF will recognize:

- That each unit should receive "a proportional share fleetwide of each year group of aircraft."
- The forecast PDM schedule.

7. Until the known shortage of AGE and spare parts can be alleviated by new procurement, maximum utilization of equipment at colocated SAC bases (Rickenbacker, Pease, and Fairchild) will be encouraged.

Based on early observations of the 160th ARG's conversion progress at Rickenbacker, I believe we can safely predict that the ANG KC-97 refueling units will move quickly and efficiently into the modern jet equipment. The increased aircraft size and weight will soon feel quite comfortable, but it probably will be a long time before KC-97 pilots adjust to the absence from the flight deck of that friendly, ever present flight engineer they learned to bank on so heavily. KC-97 navigators and boomers moving into the jet will find some "state of the art" technical advances in the crew positions. Two observer couches will take a lot of weight off the boomer and make his work a little less intimate.

ARF units transitioning from the airlift mission will undoubtedly require some extra time to master the tricks of the refueling business. Former C-130 pilots will easily adjust to the new sound and feel of propless turbines. The sweat of short and/or unprepared field landings will fade to the back of their memories. Learning to live without reverse thrust on the landing rollout will be a new thrill. Airlift navigators will need to go back to the textbooks initially to recall the techniques of timing arrivals over precise air refueling points and planning exact orbits high over remote portions of the globe to rendezvous with thirsty SAC receivers. Low level VFR techniques will languish and be replaced by greater emphasis on celestial and polar procedures. Airlift units will need to cross-train former loadmasters and maintenance personnel to the boomer's job.

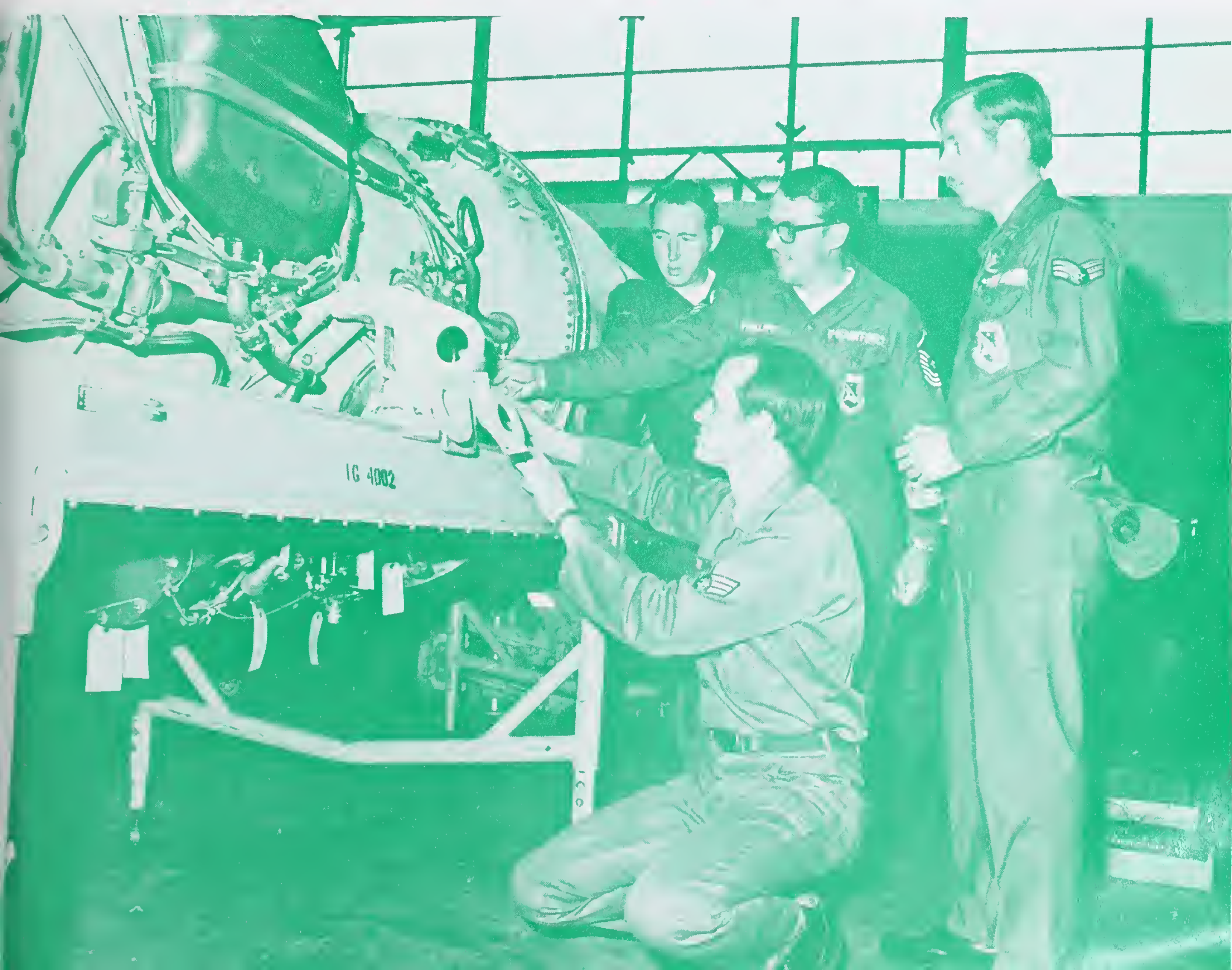
ARF units transitioning from the fighter mission will be faced with challenges over and above those already mentioned for KC-97 and airlift units. Single-seater pilots without big airplane exposure will na-

LIFELINE FOR FIGHTER AIRCRAFT—Members of the NH Air Guard's Maintenance Squadron are pictured removing the "Drogue" from a KC-135 jet tanker. Fighter aircraft are refueled through this apparatus, and it is removed when the tanker is scheduled to resupply larger aircraft. Pictured during the operation are Sgt Thomas Trombly of Hooksett; MSgt Charles Leclair of Manchester, Aircraft Crew Chief; and SSgt Richard Prescott of Dover. These activities are part of a new way of life for the NHANG which is converting to a new refueling mission.

turally find the size and weight of the KC-135 to be quite overpowering at first. But, an even greater change will be waiting for them inside the aircraft. Lengthy crew procedures and checklists will require a new outlook. Working closely with fellow crew members inside an aircraft while airborne is a much different bag than strapping on a century series fighter and blasting off

TO KEEP THE AIR GUARD ON "THE RIGHT COURSE"—Discussing the training functions of a KC-135 radar mock-up are SSgt Alfred Lavallee of Rochester, Radar Section Superintendant (157 CAM Sq), and Capt Kenneth Allen of Hampton Falls, Avionics Officer. New radar training devices are being utilized in support of the NHANG conversion to an air refueling mission in KC-135 jet aircraft.

TAKING THEIR FIRST LOOK—Personnel of the Propulsion Shop, 157 CAM Sq, take a first look at the J-57 jet engine which they will maintain in the future as a result of the NHANG conversion to KC-135 jet tanker aircraft and a new refueling mission. Standing from left to right are TSgt David Nichols of Weare, NH; SMSgt Manuel Phillips of Manchester, NH. Kneeling is Sgt Lenis Webster of Nashua.



EXECUTIVES UP FRONT—Lt. Col. James E. Cuddihee (standing), commander of the 157th Air Refueling Group (SAC), discusses KC-135 cockpit procedures with Lt. Col. Gordon W. Wright (left), 157th Chief of Operations Training Division, and Maj. Robert C. Lilljedahl are the first two NHANG instructor pilots to complete KC-135 CCTS at Castle AFB, Calif., and to return to the 157th at Pease AFB, N.H. as cadre training personnel.

DOPPLER SPECIALIST—A1C Patricia A. Martin of the 157 CAM Squadron works on the Doppler equipment aboard NHANG's KC-135 aircraft. She is responsible for inspecting, repairing and installing avionic and electronic equipment aboard the KC-135. A1C Martin served a two-year active tour at Pease AFB prior to transferring to the Air Guard.

NEARLY THE REAL THING—New Hampshire Air Guard flying officers familiarize themselves with controls and instrumentation of their new KC-135 jet tanker aircraft through use of a "Cockpit Procedures Trainer." From left to right are NHANG pilots: Capt. Richard Gazda of Hampton, Capt. William W. Rowell of Greenland (a previously qualified KC-135 pilot with SAC), and Maj. Lee H. Goodstone of Sudbury, Mass.

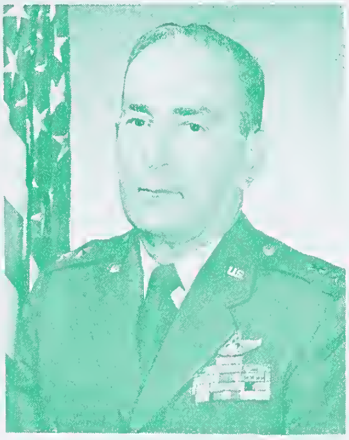
NAVIGATION EQUIPMENT "INSIDE OUT"—Checking out the complicated "innards" of the KC-135's Inertial Navigation System, or Doppler, are members of the NHANG Avionics Shop. Standing is Avionics Superintendent, MSgt Richard St Jean of Manchester. Seated left to right are SSgt Allen Nutter of Gilmanton and SSgt Kenneth Swanson. Proper maintenance of such complex electronic systems is basic to NHANG's new KC-135 jet aircraft refueling mission.

with a wingman. But eventually the fighter types will adjust and come to the realization that there is merit to being able to get up and walk around on a long flight. Exploring the delicacies prepared by the in-flight kitchen is also a positive stroke. Fighter units will, of course, need to recruit former navigators and boomers from the civilian communities.

Irrespective of their previous unit equipment and mission, we believe the new ARF squadrons will quickly realize that SAC's intense command and control and security policies and procedures will require increased vigilance and awareness on everyone's part. Two new words in their vocabulary, EWO and SIOP, will epitomize the importance of the strategic mission. Operating a SAC unit on a bustling commercial airport will be a real test for all echelons, both active duty and ARF.

By 1979, proposed federal noise and smoke restrictions could severely hamper KC-135 flying activities on civil airdromes. Hopefully, technology will help us "hush" and sanitize the J-57 engine by that time.

Unquestionably, the die has been cast. The vanguard of an eventual ARF force of over 14,000 people has donned the SAC patch. The "total force" policy is now a complete Air Force reality.



About the Author

Major General Richard Bodycombe assumed his present position May 5. He serves as the primary advisor to General Russell E. Dougherty on reserve forces assigned to the Strategic Air Command. In a national emergency, he would insure mobilization of augmentees. He would also act as liaison between SAC and civilian authorities and communities for the recovery and reconstitution of the command's strategic forces. A graduate of the University of Michigan, he holds a masters degree in education. He received his commission in 1944 after completing flying training and later flew the B-24 with 15th Air Force in Italy. When hostilities ceased in Europe, he was released from active duty and served in many positions before he became Mobilization Assistant to the Commander, Eighth Air Force, in 1972. His current assignment followed in 1975. He is a command pilot with more than 16,000 flying hours, 5500 of which is USAF time in jet and turboprop aircraft. In addition, in civilian life he is a training and standardization pilot for the Ford Motor Company Air Transportation Office with an FAA type rating in Boeing 727, Lockheed Jetstar and Convair 580 aircraft.

MAINTENANCE UNDER CONTROL—Checking construction progress of the 157 CAM Squadron's new Maintenance Control/Workload area are (standing) CMSgt Bruno Cesare of Manchester, Maintenance Scheduling Supervisor and Maj. Nicholas Wadleigh of Canaan, Commander of the 157 CAM Squadron. TSgt John Valliere (seated) of Dover demonstrates one of the new information boards which will display maintenance statistics. The new control area represents part of a major interior reconstruction of the maintenance squadron facilities in support of the new air refueling mission of the NHANG.

BIG INSTRUMENT

By Captain John L. Wilson, Chief, Instrument Division, 1st Combat Evaluation Group, Barksdale AFB.

Fact: Failures within the Pilot/Copilot instrument area during the period JAN-JUN 1975 reflect a lack of crew coordination, incomplete mission planning, and an inadequate knowledge of basic instrument procedures and techniques. 1

Fact: Most pilot and copilot failures resulted from inattention to ATC clearances and instructions. 2

Fact: During a recent 1 CEVG evaluation four crew members were unqualified in crew coordination, when two pilots failed to level off at an ARTC assigned altitude. 3

Fact: A pilot was unqualified for being fifteen miles off course during a penetration, due to an instrumentation error. Only one crew member on that aircraft noticed the problem, and he did not say anything. An intervention by ARTC prevented the aircraft from possibly hitting a tower. 4

What is the common denominator to most of these problems? CREW COORDINATION! Although not directly reflected in evaluation records, many ATC violations by pilots result in other crew members receiving unqualified grades in crew coordination. The sad part is there is no adequate reason for these failures. They generally occur because of inattention, or a reluctance to say anything. The navigator on the crew that was fifteen miles off course was overheard after the flight asking if he should have said something since he knew the aircraft was off course.

Not much is written about crew coordination. The flight manuals rarely have more than one or two pages devoted to the subject. However, it is readily obvious when glancing at the checklists that the aircraft cannot be flown by just one person. The coordinated efforts of many individuals is required to successfully complete each mission.

Crew coordination starts with knowing your own duties. Lack of knowledge about your duties means you are slow performing your job resulting in mission delays. Being slow means that the other crew members either wait for you or proceed with their duties without you. Either case usually results in the need to rush other important items and raises the possibility of mistakes being made. Knowing your job does not stop with what is written in the flight manuals. The Air Force and SAC regulations and manuals affect what you and your crew do during each mission. No matter what your crew position, you should know these regulations and manuals as well as what is written in the Dash One. Some knowledge of the other crew members' duties is also important. You should have sufficient knowledge of his job to know what he needs, when he needs it, and even when he may require some assistance during the mission. With enough information about the other man's job you will find you have the ability to detect problems and help find solutions to these problems.

Good crew coordination starts on mission planning day. Discuss the entire mission in detail, how you are going to perform each phase, and what is required from each individual. This is the place and time to anticipate problems that might come up. Plan options that will cover maintenance delays or part of the mission being cancelled. Discuss your plan to attack in case of equipment malfunctions such as radar, nav aids, radios, BNS, TFR, etc., or if adverse weather is encountered. It is almost impossible to anticipate every problem, but if you have discussed some of the major possibilities, then most other problems will require only a modification of the basic plan. With some plans in mind, inflight changes will be easier to handle, especially with the pressures of flying the aircraft.

In-flight, stay abreast of what is going on. Anticipate each phase of the flight and be ready for it. Don't wait to get ready for the phase until the last minute. Monitor and comprehend what is being said on interphone and the radios. If you did not understand something, ask. Never assume the other crew members understood. Know your clearance and ensure that it is adhered to. If you

1. **1 CEVG STANDARDIZATION/EVALUATION ANALYSIS, 1 January-30 June 1975, page 9.**
2. **Ibid.**
3. **1 CEVG evaluation records.**
4. **Ibid.**

observe a deviation or see something that may cause a deviation, **speak up**. Let the other crew members know if you have a problem or anticipate one. The earlier you form a plan to circumvent any problems, the smoother the mission will run. In short, throughout the flight, monitor interphone, radios, and the aircraft, keep informed, and help others keep informed.

One of the quickest ways to degrade crew coordination is through improper use of the interphone. Confusion almost always results when an important radio call is blocked by two crew members who are talking on interphone. All crew positions should strive for, and aircraft commanders should insist on, proper interphone discipline. Think about what you want to say before pushing the interphone button. Listen—make sure you won't interrupt an important radio call or other crew members that are using the interphone. Before you say your piece, identify who you are calling and your position (by crew position, not first names). Keep your use of the interphone to a minimum by using clear, concise language, and keep away from nonmission oriented conversations. Analyze what you intend to say in relation to the particular activities in progress. If it is not important enough to distract the crew, then you should wait for a less critical phase of the mission.

Crew coordination takes practice just like performing your job takes practice. Unfortunately, there are no cut and dried procedures for effective crew coordination. It involves performing your duties in a way so as to enhance, not hinder, the rest of the crew. It also involves being aware of what is going on around you. This all occurs at the same time. Crew coordination is not an easy task but is extremely important. There have been many aircraft accidents where a breakdown in crew coordination has been a contributing cause. These accidents can be prevented, as well as many failures during evaluation flights; but, this can only occur if every member of your crew works on and practices effective crew coordination.

(Continued from page 3)

increase our future potential to do a better job for the USAF, and to improve individuals for the benefit of the mission—not for their personal benefit.

Another observation may be pertinent—recognize that the future will not be the same as the past. Too much attention to past history (what kinds of people were promoted, how have crews done promotion-wise in the past, why was George promoted, why wasn't Sam promoted, etc.) will lead to false and erroneous conclusions about the future. Certainly, you should take advantage of educational opportunities. Obviously, you should try to get diversified experience and exposure. Clearly, you should be inquisitive and ask questions about other fields and different jobs. But having done all of the right things and all of the things you are expected to do, or the things that have been done by successful individuals in the past—will not in themselves insure your promotion or your career success.

What then can be done? My advice in this regard does not appear in textbooks, but has been developed over the years. The following four points will not insure success but they will help.

- Recognize that you may be your own worst career planner. In other words, let others plan your career by assigning you where you are needed. Too many people have bucked assignments based on inaccurate personal opinions and their efforts have usually been counter-productive. If you get too involved in your own career planning, you will in all probability lose objectivity and subsequently make the wrong decisions.

- Realize that promotions are based on future potential not on past performance. Recognition of this will save some grief and will allow individuals to work harder on things that will increase their potential.

- Get your boss promoted. This is another way of saying do your own job as best you can—your job being the furtherance of the mission. Crewmembers learn to do difficult and demanding duties in a disciplined and professional manner. Effective performance will make for a better organization and will, in fact, reflect favorably on the commander without a lot of wasted effort and worry on who gets credit for what.

- If you are asked, request duty you really want. This approach has two advantages. The first is that individuals usually do things they want to do better. The second is that people have more fun doing what they like to do. In this respect, job satisfaction is improved as is the sum of job enjoyment plus doing an important and meaningful task—probably the best reason for choosing an Air Force career in the first place. ★★★

PROFESSIONAL PERFORMERS

Individuals selected for these pages as SAC's top professional performers of the month are chosen from nominations made by all SAC units. Selection is made only after all nominations have been carefully screened and those chosen meet the highest standards of excellence as outlined in SACR 127-2.

Flying Crew

Crew R-116 of the 376 Strategic Wing was flying on evening fighter air refueling mission. The flight was normal through the initial phases of the rendezvous whereupon overrun procedures were initiated. The KC-135 was in a wings level, boom down configuration, indicating 320 KIAS when the aircraft buffeted briefly and the boom operator reported that the boom had separated from the aircraft. The right hydraulic system depleted immediately and the system was depressurized with the hydraulic pump supply switches which were placed to cut off position. The receiver visually checked the tanker and reported no other visible damage. Crew R-116 then obtained clearance to home station and relayed the emergency information to their command post on HF.

After level off on the return flight to home station, both compass systems malfunctioned and the radar started to spoke. An alternate destination was selected and an emergency was declared. The crew then requested radar vectors to a holding area in order to burn off fuel and to prepare for a landing at the alternate base. While holding, emergency flap lowering procedures were completed, a controllability check was accomplished and a new center of gravity was computed. During this period, the alternate went below minimums several times due to thunderstorm activity. In addition, lightning strikes rendered the control tower and its facilities unusable for a period of time. As a result, a mobile control unit was set up and communications were reestablished with the aircraft. The alternate weather conditions subsequently improved to above landing minimums. An instrument approach was then flown and a successful landing was completed. Members of Crew R-116 include: Aircraft Commander, Capt Cecil Bateman; Copilot, 2Lt Joe Ferry; Navigator, 1Lt Roger Sheid; Boom Operator, MSgt Gary Adams; Instructor Navigator, Major Glenn Smith (not pictured); and Pilot Upgradee, 1Lt Spencer Mamber.

PROFESSIONAL PERFORMERS

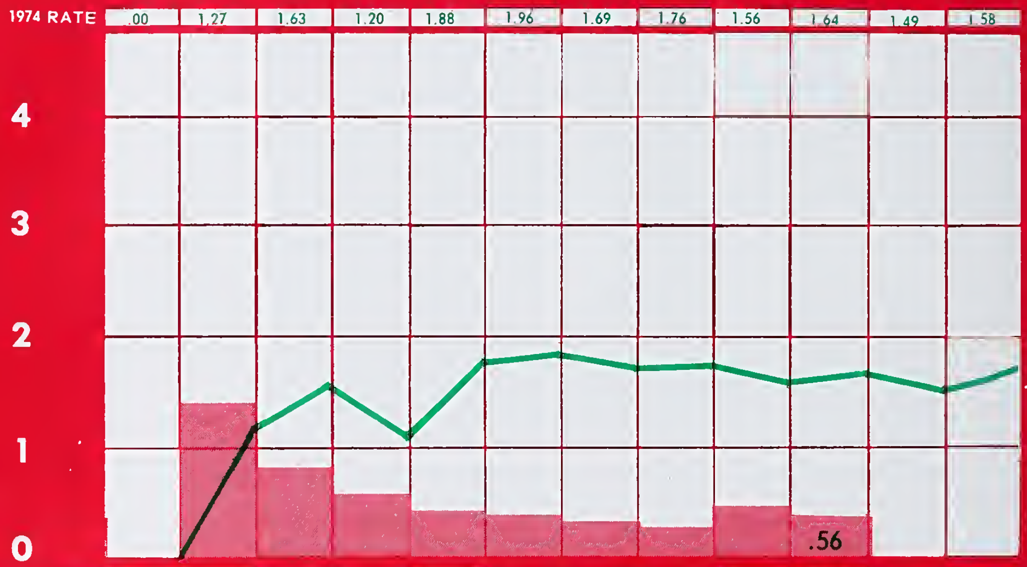
TITAN Crew R-017, 308 SMW, Little Rock AFB: MCCC Captain Walter F. Huebner, Jr., DMCCC 1Lt John D. Gilliam, MSAT Sgt Gerry W. Howington, and MFT Sgt Bernard K. Stewart.

Technical Sergeant Barry L. Rennie, 416 Field Maintenance Squadron, 416 Bomb Wing, Griffiss AFB, is SAC Maintenance Man of the Month.

MINUTEMAN Crew S-209, 351 SMW, Whiteman AFB: MCCC Captain Ronald J. Boomstra, and DMCCC 1Lt Edward A. Serine.

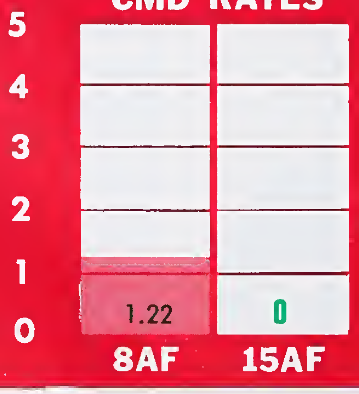
1975 Flying Safety Rate

★ SAC MAJOR ACCIDENT RATE (PER 100,000 FLYING HRS)



ACCIDENTS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1974	0	1	1	0	2	1	0	1	0	1	0	1
1975	0	1	0	0	0	0	0	0	1	0		

1975 SUBORDINATE CMD RATES



ACCIDENT STATUS

FB-111	FEB 75
B-52G	SEP 75

LEGEND — =1974 RATE

SAC Safety Screen

The SAC Safety Screen is an honor roll of SAC's most professional crews. To gain listing on the Screen, crew members must be nominated by their unit commanders and meet high selection criteria of experience in their aircraft or missile system *IAW SACR 127-2.*

380BMW, Plattsburg Crew S-154: IP Capt David J Brady, CP Capt David A Wagie, IN Capt David P Blair, IS TSgt Limous E Walker

301AREFW, Rickenbacker Crew E-114. P Capt Robert S Sniffen, CP 1Lt Edward B Hicks, N 1Lt Waldemar Kowitz, BO A1C William D Eaton

305AREFW, Grissom Crew E-170: AC Capt Louis G Gibson, CP 1Lt James R Erickson, N 1Lt Donald R. Flinn, BO Sgt Michael L Manhorr

307SW, U-Tapao Crew E-118 (TDY from Grissom): AC Capt Victor L Velle, CP 1Lt Gary G England, N 1Lt Duane R Schaefer, BO Sgt Michael V Harrison

5BMW, Minot Crew S-101: P Maj Norbert A Hala, CP 1Lt John R Dockery, NN Capt John S Debaun, BO MSgt Donald D Master

9SRS, Beale Crew S-15: P Capt Eldon W Joersz, RSO Maj George T Morgan Jr

22BMW, March Crew R-118: P Capt Richard G MacNeil, CP 2Lt Stephen C Geering, NN 1Lt Joseph P Anderson, BO SSgt Robert K Hussong

55SRW, Offutt Crew E-09: P Capt Robert N Vernlund, CP Capt Joseph E Rooney, CP Capt Roberto E Benitez, NN 1Lt Paul T Johnson

55SRW, Offutt Crew S-33: EW Capt Charles E Cherry, EW Capt Henry C Barrons, EW Capt Dennis K Haynes

93BMW, Castle Crew IT-08: IP Capt Barry C Bradford, IN Maj Orrin J Olson, IS MSgt Donley E Hanes

96BMW, Dyess Crew E-112: P Capt John R Carpenter, CP 1Lt Rayford W Willingham, NN 1Lt Edward Vallejo, BO SSgt Michael R Matlock

44SMW, Ellsworth Crew R-171: MCC Capt Ward R Wilder, DMCCC 2Lt Robert M Barnes

91SMW, Minot Crew E-061/103: MCCC Capt James E Pate, DMCCC 2Lt Steven M Hazelbaker

321SMW, Grand Forks Crew R-041: MCCC Capt Robert W Reuter, DMCCC 2Lt James R Haymon

341SMW, Malmstrom Crew R-136: MCCC 1Lt David P Tondreau, DMCCC 2Lt Darrell P Wagner

381SMW, McConnell Crew R-140: MCCC Capt Alan B Thomas, DMCCC Capt Patrick C Sullivan, MSAT Sgt Steven R Spaulding, MFT A1C Kenneth L Barnes

390SMW, Davis-Monthan Crew S-007: MCCC Capt Drayton J Lieb, DMCCC 1Lt David G Holmes, MSAT Sgt Timothy J Swanson, MFT Sgt Kenneth L Diles

☆U. S. Government Printing Office:
1975-665-704/4

HALL OF FAME

TACTICAL FLYING

OVER SIXTEEN YEARS

916 AREFS, Travis	Sep '59

OVER FIFTEEN YEARS

97 BMW, Blytheville	Mar '60
410 BMW, K. I. Sawyer	Oct '60
19 BMW, Robins	Oct '60

OVER THIRTEEN YEARS

11 AREFS, Altus	Feb '62
301 AREFW, Rickenbacker	Jul '62
96 BMW, Dyess	Aug '62
449 BMW, Kincheloe	Aug '62

OVER TEN YEARS

320 BMW, Mather	Jul '65

OVER EIGHT YEARS

92 BMW, Fairchild	Feb '67
55 SRW, Offutt	Aug '67
2 BMW, Barksdale	Aug '67

OVER SEVEN YEARS

319 BMW, Grand Forks	Dec '67
22 BMW, March	Feb '68

OVER SIX YEARS

5 BMW, Minot	Feb '69
95 SW, Goose	May '69
6 SW, Eielson	Jul '69
42 BMW, Loring	Oct '69
93 BMW, Castle	Nov '69

OVER FIVE YEARS

28 BMW, Ellsworth	May '70

OVER FOUR YEARS

509 BMW, Pease	Nov '71

ICBM

OVER ELEVEN YEARS

381 SMW, McConnell	Nov '63
90 SMW, F. E. Warren	July '64
1 STRAD, Vandenberg	Sep '64

OVER TEN YEARS

308 SMW, Little Rock	Aug '65

To gain listing in the Hall of Fame, a SAC unit must be accident-free for 48 months.

COMBAT CREW INDEX

1975

ACCIDENT PREVENTION, GENERAL

TITLE	MONTH
Request Emergency Landing	Jan
Anon E. Mouse	Jan
A Vote for the Dash One	Mar
Let's Play Roulette	Mar
Make A Decision	Apr
Watch it With the Throttles	May
Your Midair	Jun
Supervisor of Flying	Jul
Tap Water Contamination	Sep
Back to Haunt Us	Sep
All This Harassment	Sep
Of ARAs and Mountains	Sep
For the Birds	Oct
Anon E. Mouse	Oct
Operational Hazards	Nov

BOMBER/TANKER

TITLE	MONTH
A Time for Pilot Action	Jan
Obvious . . . . In Hindsight	Feb
Dropped Jaws	Feb
A Look at the Left Seat	Feb
The D Will Never Die	Mar
Who's in Charge Here	Mar
It's Dark Out There	May
Take That Tanker	May
Copilot in Command	Jun
Floating Down the Runway	Jul
Caution	Oct

ICBM

TITLE	MONTH
A Day in the Life of a Titan Crew	Jan
The Proving Ground	Feb
Simulated Launch	Feb
Recycle	May
How Long Will it Last	Jul
Operational Test Launch	Oct
Change Those Targets Now	Dec

EGRESS

TITLE	MONTH
Walking Away From It	Jan
B-52 Ejection System	Feb
B-52D Egress Update Program	Jul
Trapped in the LCF	Aug
It's Your Life	Nov

CREW PROCEDURES

TITLE	MONTH
Big Instrument	Jan-Dec
We're All In This Together	Mar
Locked On	Jun
Automated Offset	Aug
EVS Distraction	Aug
Navigator Speaks	Aug
Time on Your Hands	Sep
Crewview	Oct

CREW CONDITION

TITLE	MONTH
Hypothermia	Aug
Crew Rest	Sep
The Average One	Sep
Eyes of an Eagle	Oct
Frostbite	Dec

SPECIAL SUBJECTS

TITLE	MONTH
Giant Voice '74	Jan
One Leg Up	Mar
Olympic Arena '75	Apr
Year of the Titan	Jun
New Horizons in Simulation	Jul
End of an Era	Aug
High Noon	Oct
New Sights for SAC	Nov
Air Reserve Forces	Dec

WEATHER

TITLE	MONTH
Low Level Wind Shear	Feb
Iced Out	Jun
Lightening Strikes	Jun
Winter Invasion	Nov

MISCELLANEOUS

TITLE	MONTH
The Other Half	May
Nothing to Lose But Rust	May
Aircrew Management	Jun
Tankers in the RAF	Jul
Hey, Hey, Hey	Aug
Controller in the Cockpit	Sep
Times Have Changed	Oct
BUF Copilot	Oct
A Vital Key	Nov
Before and After the Klaxon	Dec

UNIVERSITY OF FLORIDA
3 1262 09304 8493

SEASON'S
GREETINGS

from the

Staff